

2. (Twice amended) A method as claimed in claim 1, said method comprising:
contacting said cell with said antigenic molecule and with a photosensitizing agent,
wherein said molecule and said agent are each taken up into an intracellular membrane-restricted
compartment of said cell; and

irradiating said cell with light of a wavelength effective to activate the photosensitizing
agent, such that the membrane of said intracellular compartment is disrupted, releasing said
molecule into the cytosol of the cell, without killing the cell,

wherein, said released antigenic molecule, or a part thereof of sufficient size to generate
an immune response, is subsequently presented on the surface of said cell.

7. (Three times amended) The method of claim 2 wherein the photosensitizing agent is
selected from the group consisting of a porphyrin, phthalocyanine, purpurin, chlorin,
benzoporphyrin, naphthalocyanine, cationic dye, tetracycline, a lysotropic weak base thereof,
and a derivative thereof.

8. (Twice amended) The method of claim 2 wherein the photosensitizing agent is meso-
tetraphenylporphine with 4 sulfonate groups (TPPS₄), meso-tetraphenylporphine with 2 sulfonate
groups on adjacent phenyl rings (TPPS_{2a}), or aluminum phthalocyanine with 2 sulfonate groups
on adjacent phenyl rings (AlPcS_{2a}). [TPPS₄ TPPS_{2a}, or AlPcS_{2a}].

REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on June 18,
2002, and the references cited therewith.

Claims 1, 2, 7 and 8 are amended. Claims 1-11 are now pending in this application.
Amended claims 1 and 2 are supported by originally filed claims 1 and 2 and at page 7, lines 30-
31. Amended claim 7 is supported by originally filed claim 7 and at page 12, lines 25-29.
Amended claim 8 is supported by originally filed claim 8 and at page 10, lines 6-10 of WO
96/07432, incorporated by reference at page 12, lines 14-16 of the present specification.

The text of the inserted paragraph is found at page 10, lines 6-10 of WO 96/07432,

CLEAN VERSION OF PENDING CLAIMS

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Applicant: Kristian Berg et al.

1. (Twice amended) A method of expressing an antigenic molecule on the surface of a cell, said method comprising introducing a molecule into the cell cytosol by photochemical internalization, wherein said molecule, or a part thereof of sufficient size to generate an immune response, is subsequently presented on the surface of said cell.

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2. (Twice amended) A method as claimed in claim 1, said method comprising:
contacting said cell with said antigenic molecule and with a photosensitizing agent, wherein said molecule and said agent are each taken up into an intracellular membrane-restricted compartment of said cell; and

irradiating said cell with light of a wavelength effective to activate the photosensitizing agent, such that the membrane of said intracellular compartment is disrupted, releasing said molecule into the cytosol of the cell, without killing the cell,

wherein, said released antigenic molecule, or a part thereof of sufficient size to generate an immune response, is subsequently presented on the surface of said cell.

3. The method of claim 1 wherein the antigenic molecule is a molecule capable of stimulating an immune response.

4. The method of claim 3 wherein the antigenic molecule is a vaccine antigen or vaccine component.

5. The method of claim 1 wherein the antigenic molecule is a peptide.

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6. (Twice amended) The method of claim 1 wherein the cell is an antigen presenting cell selected from the group consisting of a lymphocyte, dendritic cell, macrophage and cancer cell.

7. (Three times amended) The method of claim 2 wherein the photosensitizing agent is selected from the group consisting of a porphyrin, phthalocyanine, purpurin, chlorin, benzoporphyrin, naphthalocyanine, cationic dye, tetracycline, a lysomotropic weak base thereof, and a derivative thereof.

E3
8. (Twice amended) The method of claim 2 wherein the photosensitizing agent is meso-tetraphenylporphine with 4 sulfonate groups (TPPS₄), meso-tetraphenylporphine with 2 sulfonate groups on adjacent phenyl rings (TPPS_{2a}), or aluminum phthalocyanine with 2 sulfonate groups on adjacent phenyl rings (ArPcS_{2a}).

9. The method of claim 1 wherein the antigenic molecule and/or photosensitizing agent is bound to one or more targeting agents or carrier molecules.

10. The method of claim 1 wherein said method is carried out *in vitro* or *in vivo*.

11. The method of claim 1 wherein the antigenic presentation results in the stimulation of an immune response.